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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/723,598 05/07/01 BOCQUENET

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021839 HM12/0913  
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EXAMINER

SACKLEY, E

ART UNIT

PAPER NUMBER

1626

DATE MAILED:

09/13/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
09/720,598

Applicant(s)  
BOCQUENET ET AL.

Examiner  
EBENEZER SACKKEY

Art Unit  
1626



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some\* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 20) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

The preliminary amendment filed on 5/07/01 has been entered and made of record.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

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***Claim Rejections - 35 U.S.C. § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The expression “characterized” provide ambiguity and the Examiner requests use of US practice terminology. Likewise, the expression “performed with a system without retention of liquid”, “the following technologies is employed”, “employed” render the claims indefinite by placing no definite limits or boundaries on the claims. Additionally, it is not clear what applicants are claiming because claim 1 does not specify what is obtained after the vaporization of amino nitrile and water. The final product must be recited to make the claim complete.

3. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is

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considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 2-3, 5, 7 and 13 recite the broad recitation temperature range of between "120 and 600°C, 20 to 300°C, 200 to 450°C, selected dinitriles, and dwell time of less than or equal to one minute" respectively, and the claim also recites "a temperature range of preferably 200 to 550°C, 100 to 250°C, 250 to 400°C", "preferably 6-amino-

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capronitrile” and “preferably less than or equal to 5 seconds” respectively which is the narrower statement of the range/limitation.

***Claim Rejections - 35 U.S.C. § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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6. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (U.S. Patent No. 3,658,810) or WO 98/37063 or WO A-96/22974, cited by applicants.

Applicants claim a process for vaporizing amino nitrile and water, in that the water in the vapor state is used as a carrier.

Determination of the scope and content of the prior art (MPEP §2141.01)

Tanaka et al disclose the preparation of caprolactam by contacting continuously with steam aminocaproic acid or caproamide or a mixture of the two at a temperature of between 150-400°C. See column 1, lines 14-31, column 2, lines 68-72. WO '082' disclose the preparation of caprolactam by treating 6-aminocaproic acid, 6-aminocaproate ester or 6-aminocaproamide or mixtures thereof in the presence super heated steam in which a gaseous mixture comprising caprolactam and steam is obtained. See page 1, lines 1-12, page 2, lines 29-35, page 3, lines 25-38 page 5, lines 18-37, page 6, lines 1-4. It would have been obvious to prepare compounds by method of the references in the absence of any unobvious results especially since only

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the caprolactom is being produced. It is obvious to prepare compounds by old method or series of method using like or analogous starting materials.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference between the instant process and the prior art is that the instant claims are directed to "vaporizing a mixture" whereas the prior is directed to a mixture of "steam" and aminocaproic acid or caproamide.

Finding of prima facie obviousness---rational and motivation (MPEP §2142-2143)

It would have been obvious to prepare compounds by method of the references in the absence of any unobvious results especially since only the caprolactom is being produced. It is obvious to prepare compounds by old method or series of method using like or analogous starting materials.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to E. Sackey whose telephone number is (703) 305-6889. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:30 pm.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane, can be reached on (703) 308-4537. The fax phone number for this Group is (703) 308-4556.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1235.

EOS

A handwritten signature in cursive script, reading "Floyd D. Higel", is written over a horizontal line.

September 7, 2001

Floyd D. Higel

Primary Patent Examiner

Art Unit 1626, Group 1600

Technology Center 1